To: Alison Jones[ajones@clearcreekassociates.com]
Cc: Rebecca Sawyer[rsawyer@excelsiormining.com]; Albright, David[Albright.David@epa.gov]
From: Rumrill, Nancy
Sent: Wed 7/26/2017 11:36:33 PM
Subject: FW: Topics for discussion at the Conference Call with Excelsior on July 27.
Florence Copper Description of EC monitoring 9142015.pdf

Hi Alison,

Please see the following list of items from our Contractor that we are prepared to discuss with you and the attached background on Florence Copper's Electrical Conductivity sensor monitoring (see attachment) for tomorrow's conference call. I apologize for not getting this information to you sooner, but I just got back from my vacation.

Thanks, Nancy

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United States Environmental Protection Agency

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From: JAMES D WALKER
Sent: Wednesday, July 26, 2017 4:07 PM
To: Rumrill, Nancy <Rumrill.Nancy@epa.gov>
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Subject: Topics for discussion at the Conference Call with Excelsior on July 27.

Based our review of the revised permit application submitted in June 2017 and the proposed electrical conductivity demonstration submitted on July 12, the following topics are considered the key issues for discussion and resolution with Excelsior before the draft permit is finalized.

- Conductivity Sensor Demonstration: The proposed demonstration of multiple sensors is an improvement over the use of a single sensor, but we have some questions/doubts about its efficacy. An electrical conductivity profile of the injection zone, similar to the Florence Copper proposed arrangement, is preferred over the Excelsior proposed demonstration of sensors to measure specific conductance of wellbore fluids.

- Aquifer Exemption Delineation: The upper elevation limits for the aquifer exemption should be revised from a fixed elevation of 4,185 feet to a variable elevation of 4,185 feet increasing westward to 4,539 feet, based on the potentiometric surface of the exempted aquifer as depicted in Figure A-4.

- Observation Well Monitoring: The discussion in Attachment A-1 of the revised permit application indicates that observation wells will be used for monitoring groundwater quality during the post rinsing period, and the discussion in Attachment P appears to confirm that. However. those provisions are not consistent with the discussion of that issue during the July 12 conference call. Please clarify.

- Mechanical Integrity Testing: The language in Attachments A-1 appears inconsistent regarding Part I MIT requirements for other than injection/recovery wells. The first sentence states that injection/recovery, HC, OW, and POC wells will all require Part I MITs, but the next paragraph refers only to injection/recovery wells. Please clarify.

The Part II MIT discussion of geophysical logging plans is also unclear regarding which wells will be logged with temperature and cement bond logs. The first sentence states that injection/recovery, POC, OW, and HC wells will all be logged with either temperature or CBLs, but the next sentence refers only to injection wells. Please clarify.

The language in Attachment P regarding Part 1 and Part II MITs is similarly unclear. Please clarify.

- Post-Closure Cost Estimates: The closure cost estimates in Attach R-3 omit the cost of monitoring at observation wells during the post-rinsing period and the POC abandonment costs. Permit conditions will require quarterly monitoring for indicator parameters and semi-annual monitoring for all parameters, which will further increase the monitoring costs. Please update the cost estimates accordingly.

The review of the revised permit application found a number of other related and minor issues, but most responses provided in the application were considered acceptable.

If you have any questions, please let me know.

Thanks,

Jim